LETTER TO THE EDITOR:
WOOD AND FIBER SCIENCE

I would like to make a correction to the article "Modelling direct current resistivity of wood polymer composites," *Wood and Fiber Science* 21(4):411–419. In this article, Siau's geometrical model was used to develop Eq. 2, which is correct. The results of computing resistivity values at different moisture contents and polymer loadings using Eq. 2 are illustrated in Fig. 3. However, it was recently discovered that an error was made when entering Eq. 2 into the computer for graphing, giving an erroneous graph in Fig. 3. The corrected graph is attached to this letter.

The corrected graph was computed with a constant polymer resistivity of 10^{13} ohm-cm. The results predict a decrease in composite resistivity with increasing polymer loading in the 0.5% to 7.0% MC range. The resistivity remained constant above that range and was the same as untreated wood. The experimental work reported in the article showed decreased resistivity with polymer loading up to approximately 16% MC. The rule of mixtures model appears to better predict the resistivity values with changes in polymer loading and moisture content than the geometrical model.

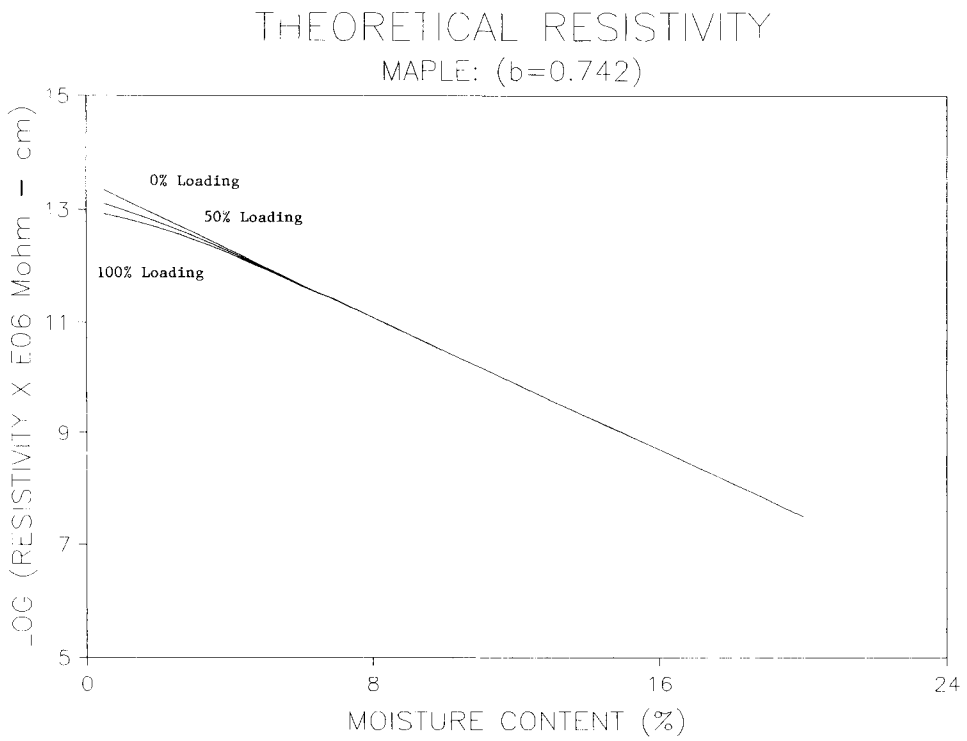

FIG. Geometrical model predictions of change in resistivity with polymer loading and moisture content.

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I appreciate the assistance given by Dr. John F. Siau, which led to the discovery of the error.

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